REMARKS

In view of the foregoing amendments and the following remarks, favorable reconsideration of the outstanding Office action is respectfully requested.

Claims 2-4, 13, 21-33, 35-39 and 41-45 remain in this application without amendments. Claims 1, 5-12, 14-20, 34 and 40 are amended. No new claim is added. No claim is canceled.

I. Allowed/Allowable Subject Matter

Applicants note with appreciate that, in Item 17 of the detailed action of the Office action, the Examiner has indicated that claims 5-24, 26, 30-33, 37-39 and 45 would be allowable if rewritten to overcome the claim objection and/or the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in the Office action and to include all claim limitations of all the base claims and any intervening claims.

II. Double Patenting Rejection

In Item 2 of the detailed action of the Office action, the Examiner has provisionally rejected claim 25 of the present application under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 48 of copending Application No. 09/907,080.

The Examiner asserted that "[a]lthough the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons. The difference between claim 48 of copending Application No. 09/907,089 and claim 25 of the present invention is the requirement of at least one acidic additive or at least one basic additive. However, it is obvious to add the acidic additive or the basic additive because they can improve the kinetics of return to the light state of the resin derived from the composition as indicated in claim 1 of the copending Application No. 09/907,080."

Applicants respectfully traverse this rejection. The Examiner has failed to meet his burden in establishing a prima facie obviousness case. Essentially, the Examiner rejected claim 25 of the present application as being obvious over claim 48 of copending Application No. 09/907,089 in light of the teaching of claim 1 of the same copending application. In doing so, the Examiner has treated copending Application No. 09/907,089 as a prior art reference. This is clearly contrary to the law and the current practice of the PTO. On obviousness-type double patenting rejection, the MPEP provides:

> A double patenting rejection of the obvious-type is "analogous to [a failure to meet] the non-obviousness requirement of 35 U.S.C. 103" except that the patent principally underlying the double patenting rejection is not considered prior art. *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Therefore, any analysis employed in an obvious-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).

The MPEP, Eighth Edition, 804 (emphasis added).

Applicants respectfully request the Examiner to withdraw this double patenting rejection.

III. Claim objections

In Item 3 of the detailed action, the Examiner rendered a series of objections as to the claims.

First, the Examiner requested Applicants to remove all unnecessary symbols such as "-," "+," etc. in the claims. Although Applicants believe that such symbols do assist in clarifying the structure and meaning of the claims, and they do not cause confusion as to the meaning of the claims, Applicants have complied with this request and amended the claims.

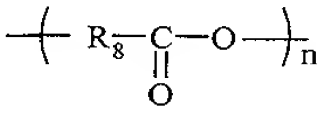
Second, the Examiner asserted that the "instant claims are full of radicals and/or groups designated with the same symbol, but with inconsistent scopes. For example, there are at least three R_1 groups in claim 1, the scopes of them are not consistent. There are lots of other symbols (e.g., R, R', R_1', R_3, n, etc.) throughout the instant claims have the same problem." Applicants have amended the claims, including the formulae therein, accordingly.

Third, the Examiner asserted that in claim 1 (page 18, line 23), "alkylene oxide radicals and" should be deleted because "m" has nothing to do with the carbon number of alkylene oxide radicals, rather it determines the total carbon number of the polyalkylene oxide chain." Applicants submit that when m=1, the formula

$$-\left(-R_7-O-\right)_m-$$

becomes a single alkylene oxide unit. By the language of claim 1 in this relevant part, the single alkylene oxide unit when m=1 should have a total carbon number of between 2 and 112. Therefore, the choice of m does have something to do with the total number of the alkylene oxide unit. Whereas Applicants do not agree with this objection, Applicants have amended claim 1, supra, to avoid any possible confusion.

Fourth, the Examiner asserted that in claim 1 (page 18, line 29), "ester radicals and" should be deleted because "n" has nothing to do with the carbon number of ester radicals, rather it determines the total carbon number of the polyester chain. Applicants submit that when n=1, the formula

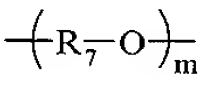


becomes a single ester radical unit. By the language of claim 1 in this relevant part, the single ester radical thus should have a total carbon number of between 2 and 168. Therefore, the choice of n does have something to do with the total number of the ester radical. Whereas Applicants do not agree with this objection, Applicants have amended claim 1, supra, to avoid any possible confusion.

IV. Rejections under 35 U.S.C. 112

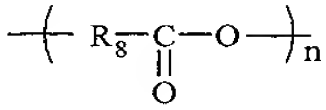
The Examiner has rejected claims 1-39 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Examiner asserted that "[i]n claim 1 (page 18, line 24), '2' causes confusion because 'm' is at least 2, and R[R_7, as amended herein] comprises 2 to 5 carbon atoms." Applicants respectfully traverse this rejection. Nowhere in claim 1 stipulates that m≥2. As indicated above, it is possible m=1, as long as the choice of m and R_7 satisfies the requirement that "the total number of carbon atoms of



is between 2 and 112." This requirement can be easily satisfied where m=1 and R_7 is ethylene, which makes the total number of carbon atoms of the formula 2.

The Examiner further asserted that "[i]n claim 1 (page 18, line 30), '2' causes confusion because 'n' is at least 2, and R[R_8, as amended herein] comprises 2 to 5 carbon atoms." Applicants respectfully traverse this rejection. Nowhere in claim 1 stipulates that n≥2. As indicated above, it is possible n=1, as long as the choice of n and R_8 satisfies the requirement that "the total number of carbon atoms of



is between 2 and 112." This requirement can be easily satisfied where n=1 and R_8 is ethylene, which makes the total number of carbon atoms of the formula 2.

Applicants respectfully request the Examiner to withdraw the above rejections of claims 1-39 under 35 U.S.C. § 112, second paragraph.

Claim 34 has been amended to depend from claim 33 instead of claim 27.

V. Rejections under 35 U.S.C. § 102

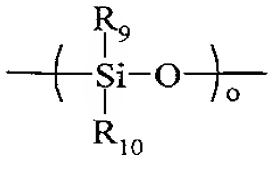
(1) In Item 7 of the detailed action, the Examiner has rejected claims 40-44 under 35 U.S.C. § 102(b) as being anticipated by Anderson (EP 0 471 972).

The Examiner asserted that, without a detailed analysis, "Anderson discloses a polymerizable composition for coating transportation vehicles (Example 16 and page 2, lines 3-6)."

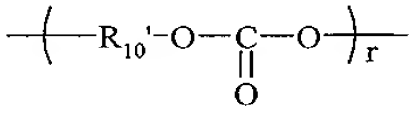
Applicants respectfully traverse this rejection.

Page 2, lines 3-6 of Anderson reads: "[t]he present invention is concerned with a water borne coating composition designed for the coating of transportation vehicles. The invention is related to coating compositions primarily for a base coat of a multicoat system which includes primers and transparent clear coats, particularly with base coats containing metallic pigments, based on acrylic latex polymers." Thus this part of Anderson does not disclose a compound falling within the scope of claim 40 of the present application.

Example 16 of Anderson discloses a reaction product of *m*-isopropenyl-α,α-dimethylbenzyl isocyanate and methoxy polyethylene glycol CH_3-O-(CH_2-CH_2-O)$_n$-H (molecular weight 550). Clearly this macromonomer does not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



or



.

Claims 41-44 are dependent from claim 40, thus are not anticipated by Anderson, either, for the same reason.

Applicants respectfully request the Examiner to withdraw this rejection.

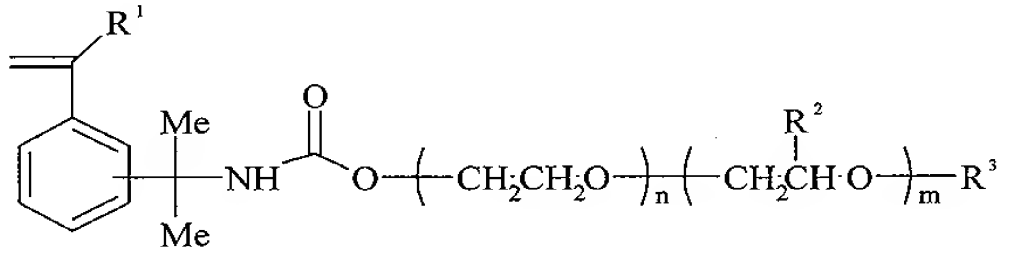
(2) In Item 8 of the detailed action, the Examiner rejected claims 1-4, 27-29, 34-36 and 40-44 under 35 U.S.C. § 102(b) as being anticipated by Fijikake (JP 09-143210).

The Examiner asserted that "Fujikake discloses an article prepared by using a polymerizable composition comprising macromonomer represented by formula (2) ([0021]) and (poly)ethylene glycol (meth)acrylate ([0030]). The polymerizable composition can be used for preparing personal care tissue, electric cables, etc. ([0075])."

Thus, clearly, it is the Examiner's view that the formula (2) macromomoner falls within the scope of claim 40, and the polymer thereof as disclosed in Fujikake falls within the scope of claims 1-4 and/or claims 27-29, and the articles containing the polymer falls within the scope of claims 30-34.

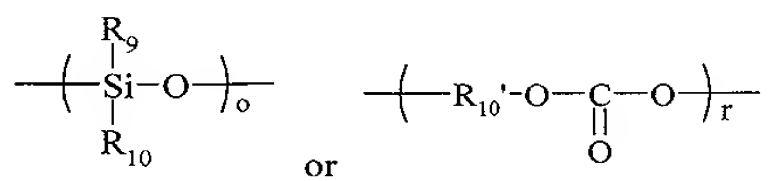
Applicants respectfully traverse this rejection.

Formula (2) of Fujikake is reproduced as follows:



.....(2)

Clearly this macromonomer does not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



which does not include a polyalkylene oxide group.

Claims 41-44 are dependent from claim 40, thus are not anticipated by Fujikake, either, for the same reason.

The polymer of formula (2) with polyethylene glycol as disclosed in paragraph [0030] of Fujikake is different from the polymer of claim 1 of the present application. The cross-linking agent polyglycol di(meth)acrylate as used in Fujikake is optional, and is used in a very small amount, in order not to compromise the water absorption ability of the polymer of Fujikake. See paragraph [0051] of Fujikake. As a result, the polymerized product of Fujikake is not highly crosslinked, or even not crosslinked at all. That is the reason why it can be used in personal care tissue and electric cables, etc., which require the materials to be supple. Hence Fujikake does not anticipate claims 1-4, 27-29 and 34-36 under 35 U.S.C. § 102(b).

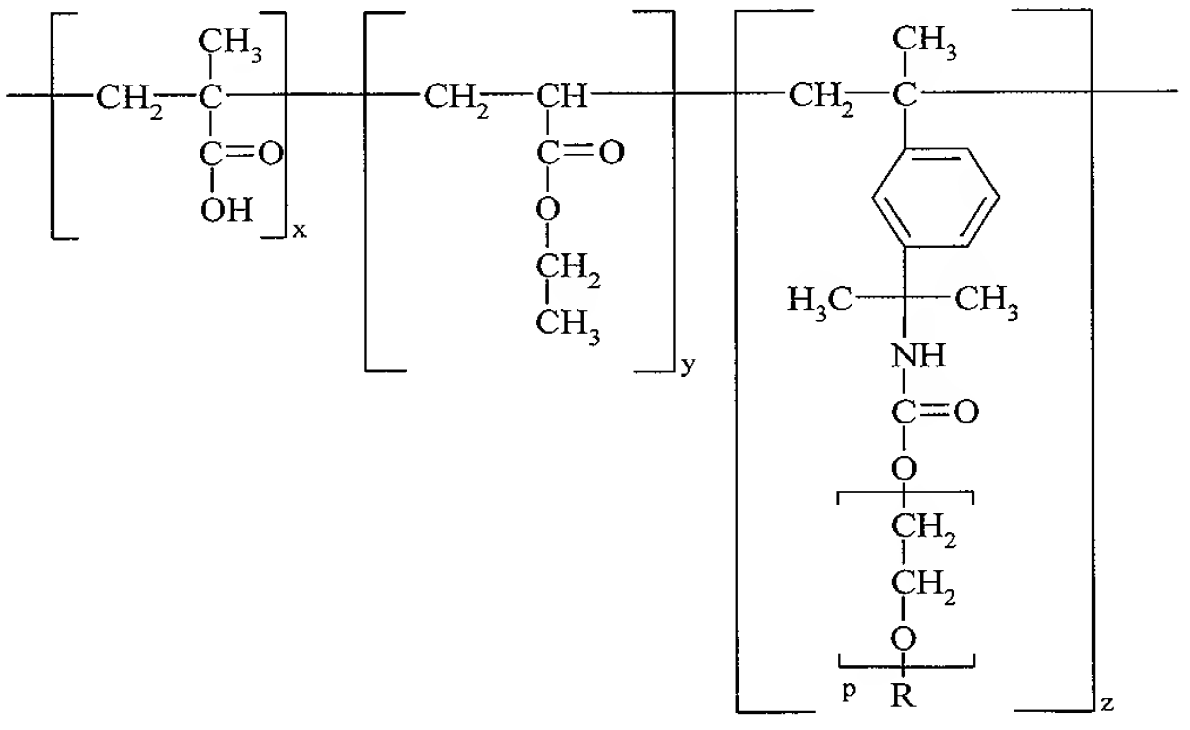
The Examiner is respectfully requested to withdraw his above rejection of claims 1-4, 27-29 and 34-36.

(3) In Item 9 of the detailed action, the Examiner rejected claims 40-44 under 35 U.S.C. § 102(b) as being anticipated by Guo (Macromol. Chem. Phys. 199, 1175-1184 (1998)).

The Examiner asserted that "Guo discloses a resin derived from a polymerizable composition comprising a macromonomer and comonomers (Materials and Figure 2). The resin can be used in a coating composition (Introduction)."

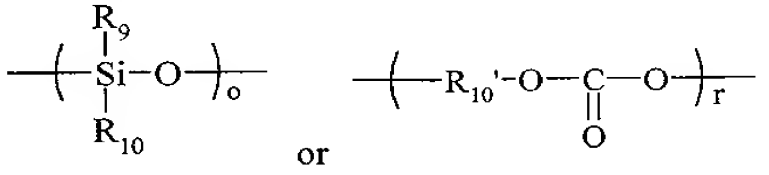
Applicants respectfully traverse this rejection.

Figure 2 of Guo is reproduced as follows:



Apparently the Examiner is taking the unit within the bracket having a subscript *z* as derived from a compound falling within the scope of claim 40.

Clearly this macromonomer does not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



or

,

which does not include a polyalkylene oxide group.

Claims 41-44 are dependent from claim 40, thus are not anticipated by Guo, either, for the same reason.

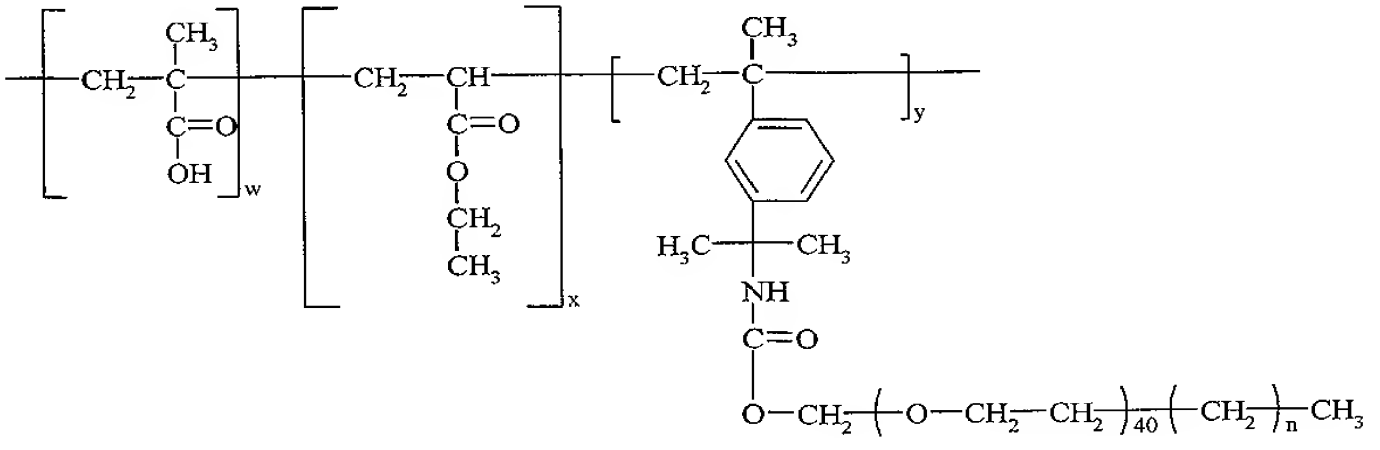
The Examiner is respectfully requested to withdraw the above rejection of claims 40-44 under 35 U.S.C. § 102(b).

(4) In Item 10 of the detailed action, the Examiner has rejected claims 40-43 under 35 U.S.C. § 102(b) as being anticipated by Olesen (Progress in Organic Coatings, 35, (1998), 161-170).

The Examiner asserted that "Oleson discloses a resin derived from a polymerizable composition comprising a macromonomer and comonomers (Figure 1 and paragraph 2.3)."

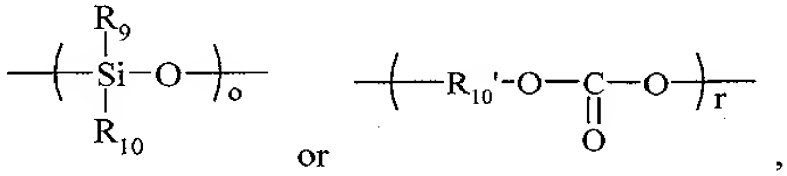
Applicants respectfully traverse this rejection.

Figure 1 of Oleson is very similar to Figure 2 of Guo. For whatever purpose it may serve, Figure 1 of Oleson is reproduced as follows:



Apparently the Examiner is taking the unit within the bracket having a subscript *y* as derived from a compound falling within the scope of claim 40.

Clearly this macromonomer does not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



which does not include a polyalkylene oxide group.

Claims 41-44 are dependent from claim 40, thus are not anticipated by Oleson, either, for the same reason.

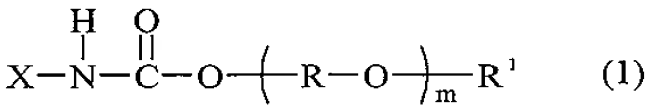
The Examiner is respectfully requested to withdraw the above rejection of claims 40-44 under 35 U.S.C. § 102(b).

(5) In Item 11 of the detailed action, the Examiner has rejected claims 40-44 under 35 U.S.C. § 102(b) as being anticipated by Komiya (JP 11-171851).

The Examiner asserted that "Komiya discloses a resin derived from a polymerizable composition comprising a macromonomer represented by formula (1) (claims 1 and 5 and [0007]-[0017]) and comonomers ([0028]-[0029]). Note that R^8 can be H or methyl and R^7 can be H (claim 5). The resins can be used for coating an article ([0031])."

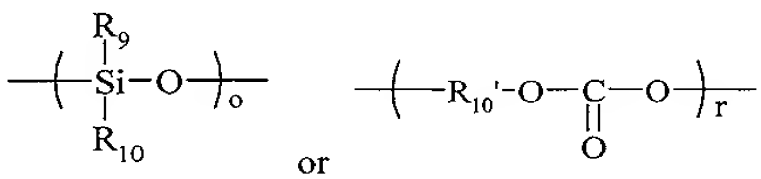
Applicants respectfully traverse this rejection.

Formula (1) of Komiya is as follows:



where R is a hydrocarbon radical. See paragraph [0007] of Komiya.

Clearly this macromonomer does not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



Claims 41-44 are dependent from claim 40, thus are not anticipated by Komiya, either, for the same reason.

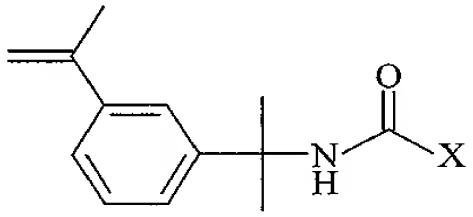
The Examiner is respectfully requested to withdraw the above rejection of claims 40-44 under 35 U.S.C. § 102(b).

(6) The Examiner has rejected claims 40-44 under 35 U.S.C. § 102(B) as being anticipated by Hutter (United States Patent No. 5,691,405).

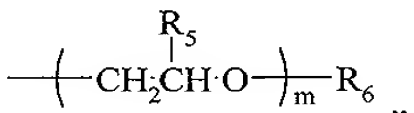
The Examiner asserted that "Hutter discloses a resin derived from a polymerizable composition comprising a macromonomer and comonomer (col. 4, line 36 to col. 5, line 53 and Table I). The resin can be used as an ink printed on plastic film laminates (col. 9, lines 53-56)."

Applicants respectfully traverse this rejection.

In its closest disclosure, Hutter describes a compound having the following formula

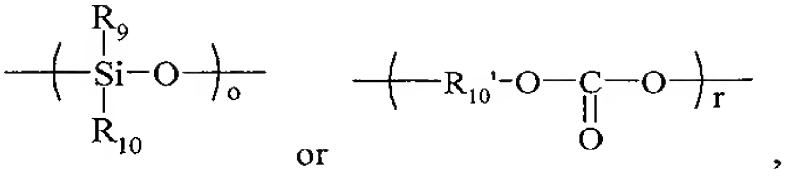


wherein X is a member selected from the group consisting of –O-R_4 or –NR_4R_4, where "R_4 is a member selected from the group consisting of hydrogen, hydrocarbyl groups, keto-substituted hydrocarbyl groups, amino-substituted hydrocarbyl groups, amido-substituted hydrocarbyl groups, imido-substituted hydrocarbyl groups, ester-substituted hydrocarbyl groups, a ring or substituted ring containing heteroatoms, polyether groups of the form



."

Clearly this macromonomer does not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



which does not include a polyalkylene oxide group.

Claims 41-44 are dependent from claim 40, thus are not anticipated by Hutter, either, for the same reason.

The Examiner is respectfully requested to withdraw the above rejection of claims 40-44 under 35 U.S.C. § 102(b).

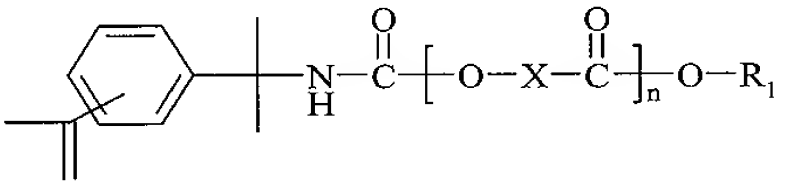
(7) In Item 13 of the detailed action, the Examiner rejected claims 40-43 under 35 U.S.C. § 102(b) as anticipated by Swarup (United States Patent No. 5,237,090).

Applicants respectfully traverse this rejection.

The Examiner asserted that "Swarup discloses a resin derived from a polymerizable composition comprising a macromonomer and comonomers (col. 3, line 30 to col. 4, line 61)."

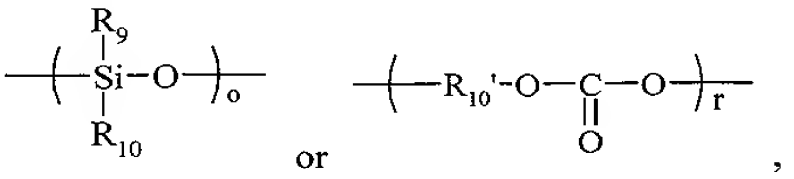
Applicants respectfully traverse this rejection.

The macromonomer as disclosed by Swarup is as follows:



wherein X is alkylene with greater than 2 carbon atoms, and n>0.

Clearly this macromonomer does not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



which does not include a polyalkylene oxide group.

Claims 41-44 are dependent from claim 40, thus are not anticipated by Swarup, either, for the same reason.

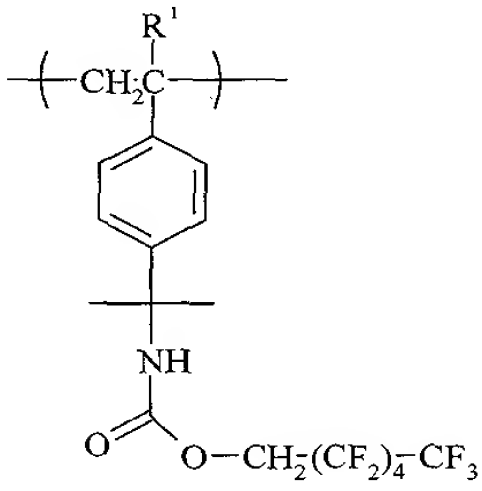
The Examiner is respectfully requested to withdraw the above rejection of claims 40-44 under 35 U.S.C. § 102(b).

(8) In Item 14 of the detailed action, the Examiner rejected claims 40-44 under 35 U.S.C. § 102(b) as being anticipated by Nishikawa (JP 2000-063765).

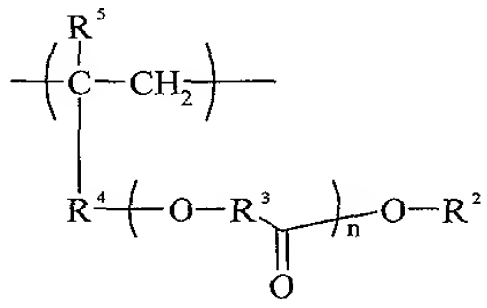
The Examiner asserted that "Nishikawa discloses a resin derived from a polymerizable composition comprising a macromonomer and comonomers ([0008]-[0022]) and [0038]-[0040]. The resin can be coated on an article (examples)."

Applicants respectfully traverse this rejection.

Nishikawa, *in its closest disclosure, describes the following repeat units in a polymer:*



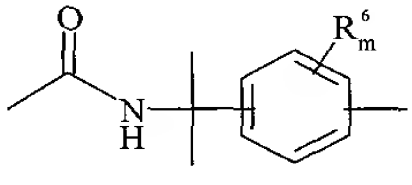
and



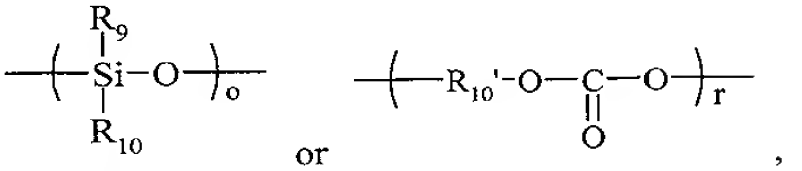
(F1) (F2)

where R_3 represents an aliphatic radical. Obviously (F1) does not fall within the ambit of claim 40 of the present application.

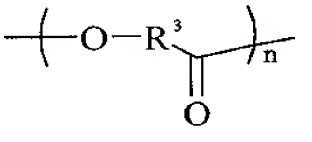
An embodiment of (F2) particularly relevant to claim 40 is one in which R^4 represents the following:



Clearly these macromonomers do not fall within the scope of claim 40, either as originally filed or amended herein, of the present application. The Examiner's attention is directed to the fact that in claim 40, in formula (I), R_5 is either



which does not include the groups



Claims 41-44 are dependent from claim 40, thus are not anticipated by Hutter, either, for the same reason.

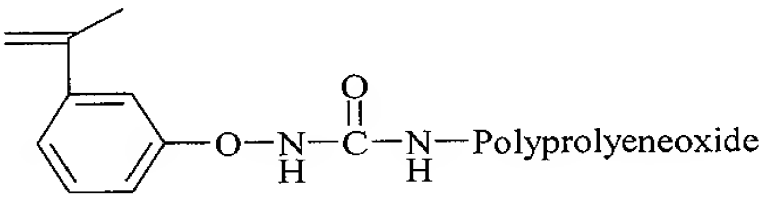
The Examiner is respectfully requested to withdraw the above rejections of claims 40-44 under 35 U.S.C. §102(b).

(9) In Item 15 of the detailed action, the Examiner has rejected claims 40-44 under 35 U.S.C. § 102(b) as being anticipated by D'Haese (United States Patent No. 5,380,779).

The Examiner asserted that "D'Haese discloses a resin derived from a polymerizable composition comprising a macromonomer and comonomers (Table II, Ex. 10). The resin can be used a pressure sensitive adhesive on tapes (col. 1, lines 10-12).

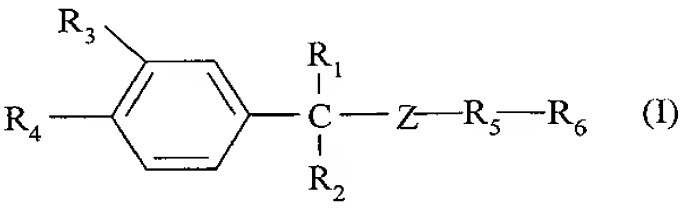
Applicants respectfully traverse this rejection.

The closest embodiment of the macromonomer as disclosed in D'Haese has the following formula (a):



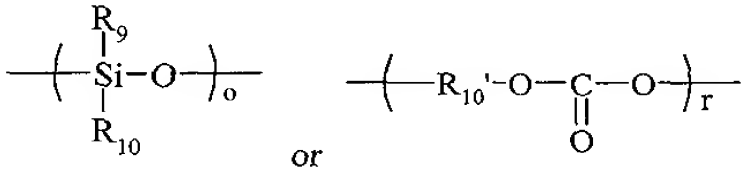
(a)

This macromonomer differs from the formula (I) macromonomer of claim 40 of the present application in many ways. For the convenience of comparison, formula (I) is reproduced as follows:



(I)

Note the presence of a $-CR_1R_2-$ between the benzene ring and the Z group in formula (I), which is not presence in formula (a). Also note that in claim 40, in formula (I), R_5 is either



which does not include a polypropyleneoxide group. Claims 41-44 are dependent from claim 40, thus are not anticipated by Swarup, either, for the same reason.

The Examiner is respectfully requested to withdraw the above rejection of claims 40-44 under 35 U.S.C. § 102(b).

(10) In Item 16 of the detailed action, the Examiner rejected claims 40-44 under 35 U.S.C. § 102(b) as being anticipated by Dai (Macromolecules, 33, (2000), 7021-7026).

The Examiner asserted that "Dai discloses a resin derived from a polymerization composition comprising a macromonomer and comonomers (Figure 1 and Abstract). The resin can be used in a coating composition (Introduction)."

Applicants respectfully traverse this rejection.

Figure 1 of Dai is identical to Figure 2 of Guo (Macromol. Chem. Phys. 199, 1175-1184 (1998)), which the Examiner relied on in rendering his rejection of claims 40-44 in Item 9 of the detailed action. For the same reasons, this rejection is traversed.

Applicants respectfully request the Examiner to withdraw his above rejection under 35 U.S.C. § 102(b) based on Dai.

VI. Conclusion

Based upon the above amendments, remarks, and papers of records, applicants believe the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Applicants believe that no extension of time is necessary to make this Amendment timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Amendment timely, and hereby authorize the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Application Serial No:
09/871,030

Attorney Docket No.:
SP00-189

The undersigned attorney has been granted limited recognition by the Office of Enrollment and Discipline of the USPTO to practice before the USPTO in capacity of an employee of Corning Incorporated. A copy of the document granting such limited recognition is either attached herewith or has been previously submitted for the record.

Please direct any questions or comments to Siwen Chen at 607-248-1253.

Respectfully submitted,

DATE: December 29, 2003

CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Mail Stop: Non-Fee Amendments, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

12-29-03

Colleen E. Doherty

Colleen E. Doherty

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BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATE PATENT AND TRADEMARK OFFICE

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

Siwen Chen is hereby given limited recognition under 37 CFR § 10.9(b) as an employee of Corning Incorporated to prepare and prosecute patent applications in which (i) Corning Incorporated is the assignee of all right, title and interest in the invention claimed in the application; (ii) a wholly-owned subsidiary of Corning Incorporated is the assignee of all right, title and interest in the invention claimed in the application; or (iii) a joint venture of Corning Incorporated is the assignee of all right, title and interest in the invention claimed in the application. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Siwen Chen ceases to lawfully reside in the United States, (ii) Siwen Chen's employment with Corning Incorporated ceases or is terminated, or (iii) Siwen Chen ceases to remain or reside in the United States on an H-1 visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: February 20, 2004

Harry I. Moatz
Director of Enrollment and Discipline